

What is claimed is:

1. An expandable arthroplasty device for use in holding a prosthesis within the intramedullary canal of a bone, comprising:

5 a first section having an outer surface for contacting the interior surface of a bone, an interior surface capable of contacting a prosthesis component, and two end sections;

a second section having an outer surface for contacting the interior surface of a bone, an interior surface capable of contacting a prosthesis component, and two end sections;

10 adjusting means, associated with said end sections of said first and second sections, capable of shifting said first and second sections between a first unactuated position and a second actuated position in which the outer surfaces of said first and second sections contact opposing interior surfaces of a bone;

15 and activating means for operating said adjusting means.

2. The device of claim 1, wherein said adjusting means comprises a pair of first screws each of which is threadedly engaged with one end section of said first and second sections.

3. The device of claim 1, wherein said activating means comprises a pair  
20 of second screws each of which is coupled to one of said first screws such that rotation of one of said second pair of screws will cause rotation of its associated first screw.

4. The device of claim 1, wherein said interior surfaces of said first and second sections are tapered.

5. The device of claim 4, wherein said device is in its actuated position, prosthesis can be held tightly in place between said tapered interior surfaces of said first and second sections.